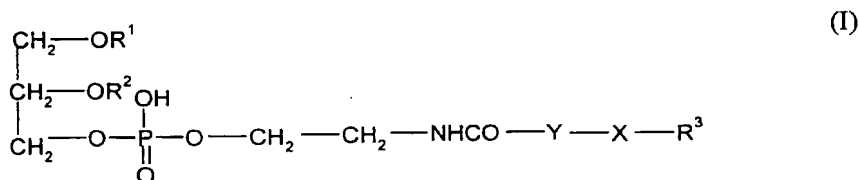


CLAIMS

1. Conjugates of lipids and basic, membrane disturbing peptides which are compounds of formula



wherein R^1 and R^2 are a hydrocarbyl moiety of a straight-chain or branched-chain, saturated or unsaturated aliphatic carboxylic acid or a phospholipid moiety, R^3 is a basic, membrane disturbing peptide with a reversed amide backbone, Y is C_{2-10} alkylene, X is $-C(O)-NH-$ or $-S-S-$ and salts thereof.

2. The compounds of claim 1 wherein R^1 and R^2 independently are an acyl moiety of a C_{12-20} carboxylic acid.

3. The compounds of claims 1 or 2 wherein R^1 and R^2 are independently selected from lauroyl, palmitoyl, stearoyl and oleoyl.

4. The compounds of claims 1 - 3 wherein X is $-S-S-$.

5. The compounds of claim 1 wherein R^3 is Gln-Gln-Arg-Lys-Arg-Lys-Ile-Trp-Ser-Ile-Leu-Ala-Pro-Leu-Gly-Thr-Thr-Leu-Val-Lys-Leu-Val-Ala-Gly-Ile-NH-CH[CONH₂](CH₂)- with a reversed amide backbone or derivatives thereof consisting of at least 50 % D-amino acids.

6. The compounds of claim 1 wherein R^3 is D-Gln-D-Gln-D-Arg-D-Lys-D-Arg-D-Lys-D-Ile-D-Trp-D-Ser-D-Ile-D-Leu-D-Ala-D-Pro-D-Leu-Gly-D-Thr-D-Thr-D-Leu-D-Val-D-Lys-D-Leu-D-Val-D-Ala-Gly-D-Ile-NH-[CONH₂]-CH-(CH₂)-.

-
- Chemical structure of the C-terminal region of the protein, showing a disulfide bond (S-S) and a phosphate group (P=O, OH). The structure is labeled with the sequence 'qqqrkiwsilaplGttlvkivaGi'.

(IV)

- [illegible]

Sub Q3

sub 24 → 16
17. Use of a compound as defined in any one of claims 1 - 9 for transfecting a cell in vivo or in vitro with a polynucleotide.

17
18. A process for transfecting a cell in vivo or in vitro with an anionic macromolecule, comprising contacting a cell in vivo or in vitro with the anionic macromolecule in the presence of a compound as defined in any of claims 1 - 9.

18
19. A process for transfecting a cell in vivo or in vitro with an anionic macromolecule, comprising contacting a cell in vivo or in vitro with the anionic macromolecule in the presence of a composition as defined in any of claims 10 - 13.

19
20. Use of a compound as defined in any one of claims 1 - 9 for introducing in vivo or in vitro a biologically active molecule into cells.

20
21. Use of a composition as defined in any one of claims 10 - 13 for introducing in vivo or in vitro a biologically active molecule into cells.

21
22. A process for introducing a biologically active anionic molecule into a cell in vivo or in vitro with an anionic macromolecule, comprising contacting a cell in vivo or in vitro with the anionic macromolecule in the presence of a composition as defined in any of claims 10 - 13.

22
23. A process for introducing in vivo or in vitro a biologically active anionic molecule into a cell, comprising contacting a cell in vivo or in vitro with the anionic macromolecule in the presence of a compound as defined in any of claims 1 - 9.

23
24. A process for introducing in vivo or in vitro a biologically active anionic molecule into a cell, comprising contacting in vivo or in vitro a cell with the anionic macromolecule in the presence of a composition as defined in any of claims 10 - 13.

add a6 →

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